Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Procedures to Govern the Use of Satellite Earth Stations on Board Vessels in Bands Shared With Terrestrial Fixed Service	)	**IB Docket No. 02-10**

Intelsat Global Service Corporation Comments

I. Introduction

Intelsat Global Service Corporation ("Intelsat") submits the following comments in response to the Commission's Notice of Inquiry ("NOI") in the above-captioned proceeding regarding procedures to govern earth stations on vessels (ESV).[1] Intelsat supports the comments by the Satellite Industry Association and in this submission provide additional comments or alternate proposals on specific sections of the NOI.

II. Examining ESV Licensing

In paragraphs 14 to 16 of the NOI, the Bureaus (the International Bureau and the Office of Engineering Technology) request comments on the necessity of licensing ESV and the best means of providing such services. Fixed-satellite service ("FSS") operators such as Intelsat have been providing ESV services for many years and it has become a mature service supplying

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[1] *Procedures to Govern the Use of Satellite Earth Stations on Board Vessels in Bands Shared With Terrestrial Fixed Service*, FCC 02-18 (rel. Feb. 4, 2002) and summarized at 67 Fed. Reg. 13300 (Mar. 22, 2002) (Notice of Inquiry).

valuable communications to ships. Current international FSS networks in the 6/4 GHz band provide both global coverage and high capacity services at reasonable cost, which is particularly suited to ESV operations.

In response to paragraph 14 of the NOI, Intelsat is of the opinion that Special Temporary Authority (STA) is not a long term solution to address the licensing requirements of ESV, particularly given the demonstrated long term viability of the service. Licensing of ESV would provide a stable environment for ship operators and service providers with the establishment of standard technical requirements and procedures for ESV operation.

III. Regulatory Issues

In paragraphs 16 to 20 of the NOI, the Bureaus inquire as to which frequency bands should be used for the operation of ESV. Intelsat supports the recently approved ITU-R Draft New Recommendation[2], which identifies the bands 5.925 to 6.425 GHz and 14.0 to 14.5 GHz for the operation of ESV within the fixed satellite service. The 6 GHz band currently has the widest coverage of ocean areas where ESV seek to operate, while the 14 GHz band, as an alternative band, has less sharing restrictions with the fixed service ("FS").

Intelsat understands the Bureaus concerns in paragraphs 18 to 20 of the NOI indicating that in some cases, coordination with terrestrial stations in the fixed service (FS) in the 6 GHz band may not be possible close to shore. To this end, Intelsat agrees that operation at 14 GHz could alleviate the coordination difficulties close to shore and dual band operations may be used as an option for ESV wishing to operate close to shore where 6 GHz is heavily used by terrestrial stations in the FS.

In paragraph 21, the Bureaus request comments regarding the regulatory approach and restrictions for ESV operations. Intelsat believes that all ESV stations should be licensed under

[2] Draft New Recommendation ITU-R SF.[Doc. 4/91-9/150], *Use of frequencies by earth stations on*

Part 25 as being within the FSS network. Appropriate sections could be added to Part 25 to include any special technical and operational requirements for such ESV stations to ensure their proper operation. Intelsat is of the opinion that no changes are required to the table of frequency allocations for ESV. In the ITU-R preparatory studies it has been proposed that a footnote be added to the frequency allocations table which would refer a Resolution (e.g., Res. 82) that would specify the appropriate technical and regulatory constraints to operate ESV's within the FSS. Intelsat would support this approach rather than the addition of the MMSS to these bands.

In paragraph 22 of the NOI, the Bureaus also seek comment on the punitive action against gateway facilities that provide service to ESV stations that repeatedly cause unwanted interference. FSS gateway earth station operators generally have limited control over the operation of an interfering ESV. Therefore, punitive action against gateway earth station operators would not be appropriate. However, gateway earth station operators can inhibit ESV transmissions or control their access to the network. Intelsat would propose that in such cases the gateway earth station operator could disable the interfering ESV when requested by the FCC. Furthermore, in paragraph 22 of the NOI, the Bureaus address the matter of jurisdiction over foreign ships operating off the United States' shores. Intelsat would support the current ITU-R studies that propose that WRC-2003 incorporate the coordination distances of draft new Recommendation ITU-R SF.[Doc. 4-95/9-154][3] into Resolution 82. It would then be possible for the FCC to exercise control over such foreign ships wishing to operate ESV within the appropriate coordination distance of the United States' shores and oblige them to request permission from the FCC before beginning transmissions.

board vessels transmitting in certain bands allocated to the fixed-satellite service.

[3] Draft New Recommendation ITU-R SF.[Doc. 4/95-9/154], *The minimum distance from the coastline beyond which in-motion earth stations located on board vessels would not cause unacceptable interference to the fixed service in the bands 5 925-6 425 MHz and 14-14.5 GHz.*

In paragraph 24 of the NOI, the Bureaus indicate the possibility of specifying minimum characteristics on ESV. Intelsat would propose that to provide the maximum design flexibility to ESV designers, parameters should be limited to an essential set of characteristics, such as an off-axis EIRP density mask for all elevation angles, that would provide protection to FS stations and adjacent FSS spacecraft operators. As a result, there would be no need to specify antenna or tracking characteristics, which may require change as the technology evolves.

In paragraph 24 of the NOI, the Bureaus further seek comment on limiting ESV to receive-only. By removing the return channel, the ESV would be severely limited in the types of service that could be provided. While broadcast applications such as video and weather data distribution would still be possible, other applications such as trunking telephony, multimedia and video conferencing that require high data rates in both directions would not be possible for public and government users.

In paragraph 25 of the NOI, the Bureaus seek comment on coordination issues. Intelsat would propose that the coordination of ESVs could be accomplished on a spacecraft transponder or channel basis instead of across the entire band. Furthermore, Intelsat concurs that coordination should be done with adjacent spacecraft that are within 10 degrees of the geostationary arc around the spacecraft towards which the ESV will transmit.

IV. Interference Issues

In paragraph 26 of the NOI, the Bureaus seek comment on the coordination distance beyond which ESV will not need to coordinate. Intelsat would propose that the value of 100 km that has been used for the STA in the bands 5 925-6 425 MHz is sufficient given the successful application to date of this distance. Furthermore, a value of 100 km would be consistent with the US international position within the ITU-R.

In paragraphs 30 and 31 of the NOI, the Bureaus also seek comment on means of

identification and an automatic mechanism to terminate transmissions. Intelsat agrees that such a licensing requirement for the provision of position data by commercial ships and a means for ceasing transmission would provide an effective way of controlling unacceptable interference into the FS.

V. Conclusion

Intelsat supports the establishment of a permanent licensing process for earth stations onboard vessels that would promote the development of the service, while protecting existing and future fixed service operations.

Respectfully submitted,

INTELSAT GLOBAL SERVICE CORPORATION

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